



## East Mississippi Electric Power Association

### HEADQUARTERS

2128 Highway 39 North • P.O. Box 5517 • Meridian, MS • 39302-5517  
601.581.8600 • Fax 601.693.0464 • [www.emepa.com](http://www.emepa.com)

---

**DATE:** March 7, 2014

**FROM:** Pat Williams – Director of Engineering  
East Mississippi Electric Power Association

**TO:** Federal Communications Commission (FCC) Staff

**SUBJECT:** Expression of Interest – Rural Trials  
Docket No. 10-90

---

### **Background**

East Mississippi Electric Power Association is a member-owned electric utility serving nearly 37,000 residential, agricultural, commercial and industrial electric customers in rural East Central Mississippi. Many of our members express their frustration with the lack of access to broadband communications, and the inability to get the extension of service into their areas by the incumbent carriers. As an electric service provider, we have also had the same issues when it comes to getting data and broadband connectivity for our business needs, such as fixed asset monitoring, control, and mobile field automation. In the age of the 'smart grid', power grid efficiency is becoming more dependent upon reliable and secure high speed communications for the electric service provider as well as the consumer as energy efficiency and distributed energy applications become more prevalent. We were created by our members to improve their quality of life. We believe that broadband access is becoming as essential to quality of life today as electricity was in the 1930's when the REA was formed. Rural areas continue to miss opportunities in education, medical services and business because of the lack of broadband access, thereby limiting the opportunities to thrive in the rural lifestyle that we call home.

EMEPA has attempted multiple times to partner with incumbent wired and wireless providers to improve the quality of communications service in our area, with no success. However, in recent years, we achieved our first success in negotiating a win-win solution in this arena with a regional CLEC. In partnership, fiber optics were extended to electrical network points of interests for smart grid applications in exchange for providing pole attachment access thereby lowering overall costs. The CLEC, Contact Network, Inc. (dba InLine), participated in NTIA grant in some of our service area, constructing nearly 800 miles and leasing nearly 300 miles of fiber. In doing so, they have brought broadband and more competition in underserved areas such as ours. EMEPA is proposing another partnership with InLine and possible partnerships with their wireless business partners in this market. InLine has also started discussions with Sprint/Clearwire and the State of MS for 2.5 GHz licensing, and will use 3.65 GHz as the fall back frequency for wireless broadband distribution services. InLine also has 600 miles of fiber optic that they are willing to provide in 'like-kind' match if necessary.

EMEPA does not have an ETC license, but would do so as required if funding is provided.

## Geographic Territory –

EMEPA serves approximately 32,000 residential and 4,800 small agricultural, commercial and industrial members in the counties of Winston, Kemper, Lauderdale and Clarke, and small portions of 7 other surrounding counties in East Central Mississippi covering over 3,000 square miles. This service territory excludes some municipal area served by one municipal and an investor owned utility located in these counties. EMEPA operates approximately 5,500 miles of electric distribution lines with an average density of 6.8 meters per electric line mile. The number of EMEPA members in each census area indicated in **Table 1** below. A percentage of eligible meters is also indicated in the table. It appears from the information provided, that the eligible locations only include locations without access to broadband in our area.

We do not believe a reasonable business case can be made to provide service to only the eligible locations in our service area because of the infrastructure required to reach them and the limited number of subscribers. At best it is a difficult business case to provide broadband to ALL of our members considering the large area and relatively low subscriber density in our service area today, even without incumbent competition. Therefore we are assuming that broadband service can be offered to all of our members including those with incumbent service.

We believe a multi-party partnership with existing broadband providers and infrastructure providers such as EMEPA may be the most cost-effective solution to bringing broadband to rural America. Appendix A includes county maps of service areas indicated in green on the inset maps, and associated census information contained in Table 1 indicated on the larger map.

CountyName	TractID	MapID	EMEPA Meters	Percent Eligible	Eligible High Cost Locations	Extremely High Cost
Clarke	28023950100	501.00	3,175	30.7%	975	73
Clarke	28023950200	502.00	2,608	20.1%	523	20
Clarke	28023950300	503.00	1,231	27.4%	337	18
Clarke	28023950400	504.00	619	6.6%	41	6
Kemper	28069030100	301.00	3,605	27.1%	977	178
Kemper	28069030200	302.00	3,129	56.1%	1754	90
Lauderdale	28075001000	010.00	32	6.3%	2	0
Lauderdale	28075010201	102.01	2,218	3.8%	84	4
Lauderdale	28075010202	102.02	2,660	4.4%	116	5
Lauderdale	28075010301	103.01	3,037	1.2%	36	2
Lauderdale	28075010302	103.02	3,399	1.3%	43	2
Lauderdale	28075010400	104.00	1,222	11.5%	140	22
Lauderdale	28075010500	105.00	2,061	0.5%	11	1
Lauderdale	28075010600	106.00	4,123	9.4%	387	15
Lauderdale	28075980000	800.00	0	0.0%	3	0
Winston	28159950100	501.00	2,068	31.1%	643	85
Winston	28159950200	502.00	2,510	24.5%	614	31
Winston	28159950300	503.00	210	10.0%	21	1
Winston	28159950400	504.00	477	3.4%	16	0
Winston	28159950500	505.00	2,593	20.5%	531	23

**Table 1. EMEPA Electric Consumers per Census Block.**

### **List of Anchor Institutions**

Various county government entities in Winston(2), Kemper(2), Lauderdale(1), Clarke(2), City of Noxapater, East MS Community College, Kemper Academy, Kemper County Schools, West Lauderdale Schools, Southeast Lauderdale County Schools, Northeast Lauderdale County Schools, Clarkdale School, East Mississippi State Hospital, Winston County Jail, John C. Stennis Memorial Hospital, Kemper Neshoba Regional Correction Facility, Winston Choctaw County Regional Correction Facility

### **Proposed Technology**

EMEPA is proposing to deploy a hybrid fiber optic/wireless solution in order to cost-effectively reach all of the members in our service area. FTTH may be an option for some locations and anchor institutes. Wireless broadband service of 5 Mbps and 10 Mbps will be offered initially, with FTTH service available after initial deployment with up to 1 Gigabit service in limited areas. Wireless spectrum utilization will be one or both of the 3.65 GHz and 2.5 GHz bands. Wireless broadband services are estimated to be priced at a monthly fee of \$50 (5 Mbps) and \$75 (10Mbps). Obviously FTTH service over our entire service area is a very expensive endeavor, however this stage of deployment can serve as the backbone of future deployment of FTTH. EMEPA believes FTTH is the ultimate solution, however achieving this will take a substantial amount of subsidy to make a viable business case, even for a not-for-profit, member owned cooperative. Appendix B contains a map of the initial propagation study results.

### **State and/or Local or Tribal Government Participation in and/or Support for Project**

No direct government support is expected for this project. Existing infrastructure installed as a part of the NTIA grants will be leveraged where available in support of this project.

### **Existing Providers**

Fiber/Wired: AT&T, CSpire, Comcast, CMA, MetroCast, Cablevision, Zoom Media, InLine

Wireless: AT&T, CSpire, Sprint, Verizon

Service varies greatly throughout EMEPA service territory. The percentage of the wired providers in totality can be derived from the percent eligible values indicated in Table 1. Wireless broadband is very limited in the EMEPA service territory, with LTE being activated in limited area, only in the last year.

### **Project Timeline**

EMEPA has been considering the issue of data service and broadband access for over 20 years, and has partnered successfully in recent years to achieve portions of this type of project including business partnership and support of building the fiber optic backbone now providing Gigabit service in our area. This funding opportunity in conjunction with our partnership with an experienced CLEC has driven EMEPA to further explore offering or partnering to offer broadband services in our service area. High level, technical feasibility studies have been completed for this submittal. Additional technical and financial feasibility studies to achieve justification and startup will require approximately 6 months. Additional partners in this project will likely make it more successful, however may extend the time required to put the business case together.

### **Scalability**

This project is proposed to provide a minimum of 10 Mbps service to the 37,000 locations in the EMEPA service area. FTTH in certain areas will be available as a second stage upon successful implementation of wireless service. Advances in wireless technology are expected to increase the available bandwidth in future years as a third stage of scaling. Finally, extension of FTTH to additional locations will be more feasible as technology costs continue to drop, thereby expanding the business case. Sufficient backbone infrastructure will be provided to encourage additional services in the area as well.

**Total Utility Investment**

\$8M

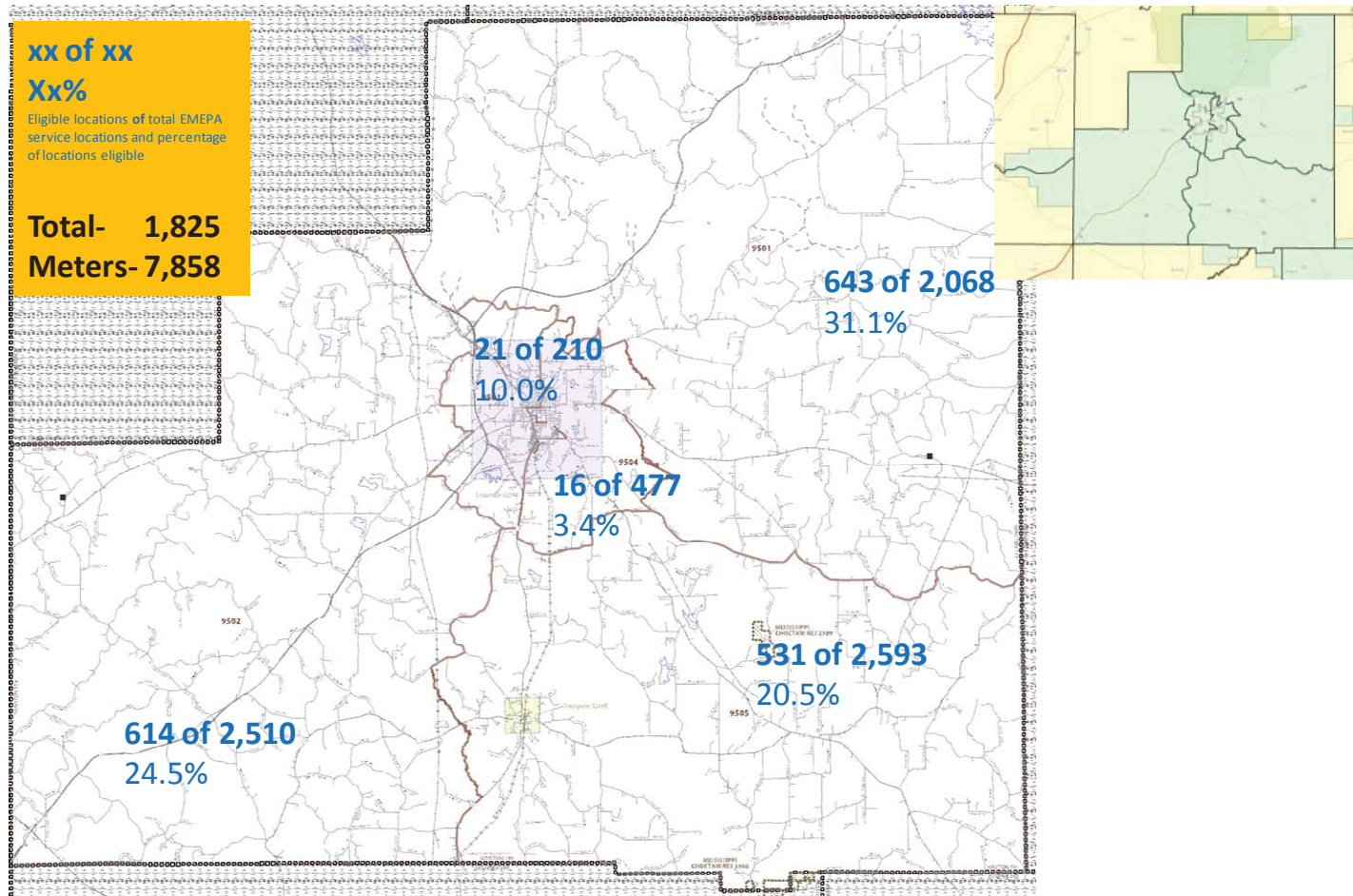
**One Time Capital Infrastructure Investment Needed**

\$12M

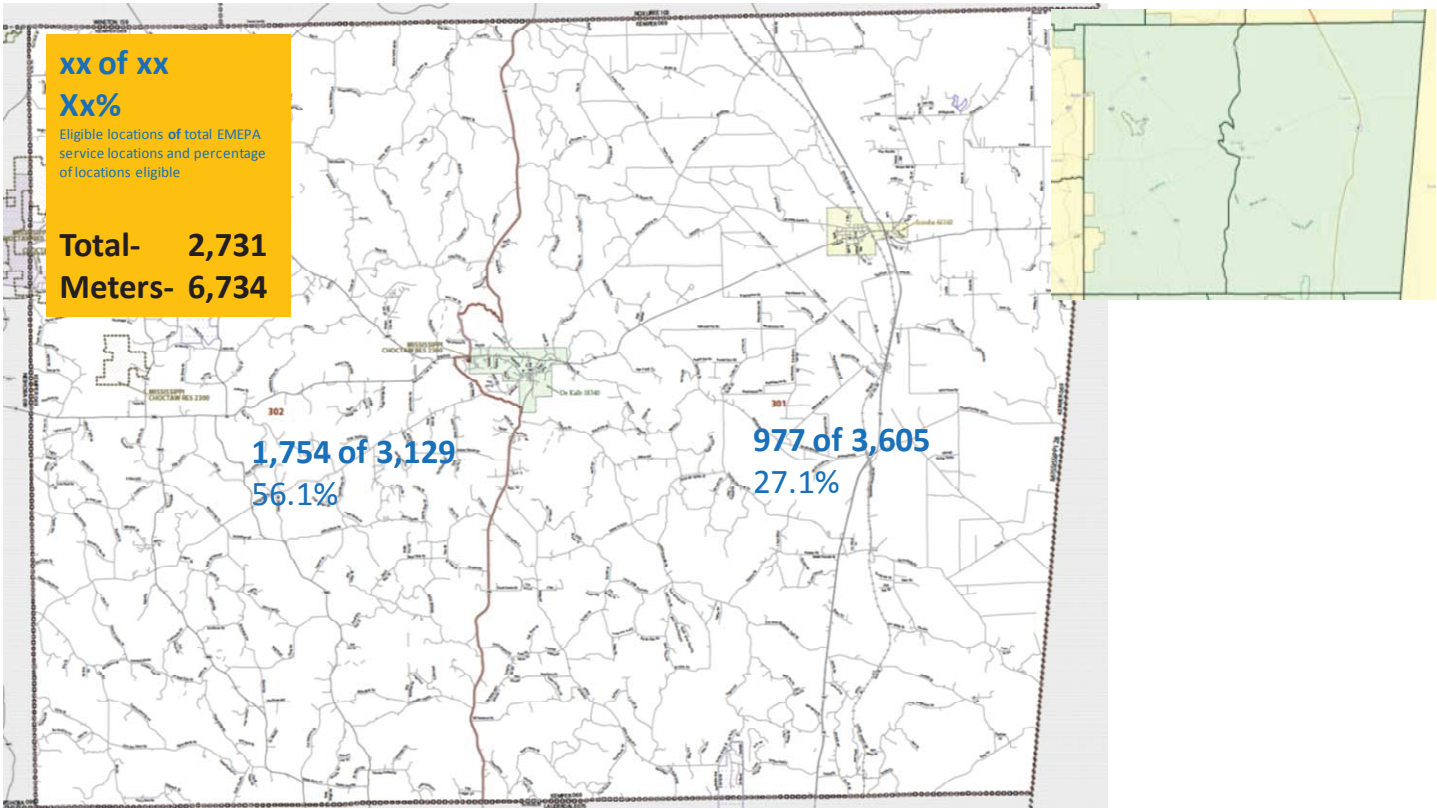
**Total Project Cost**

\$20M

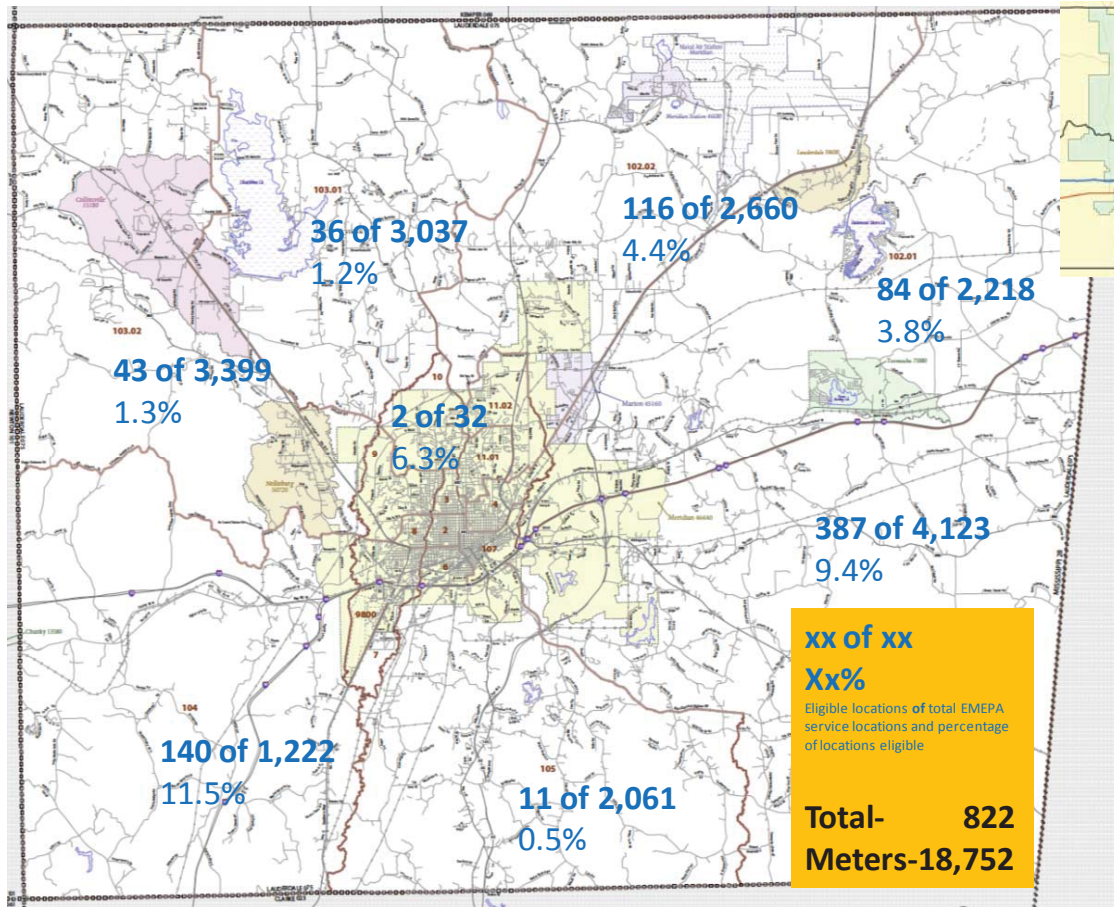
# Winston



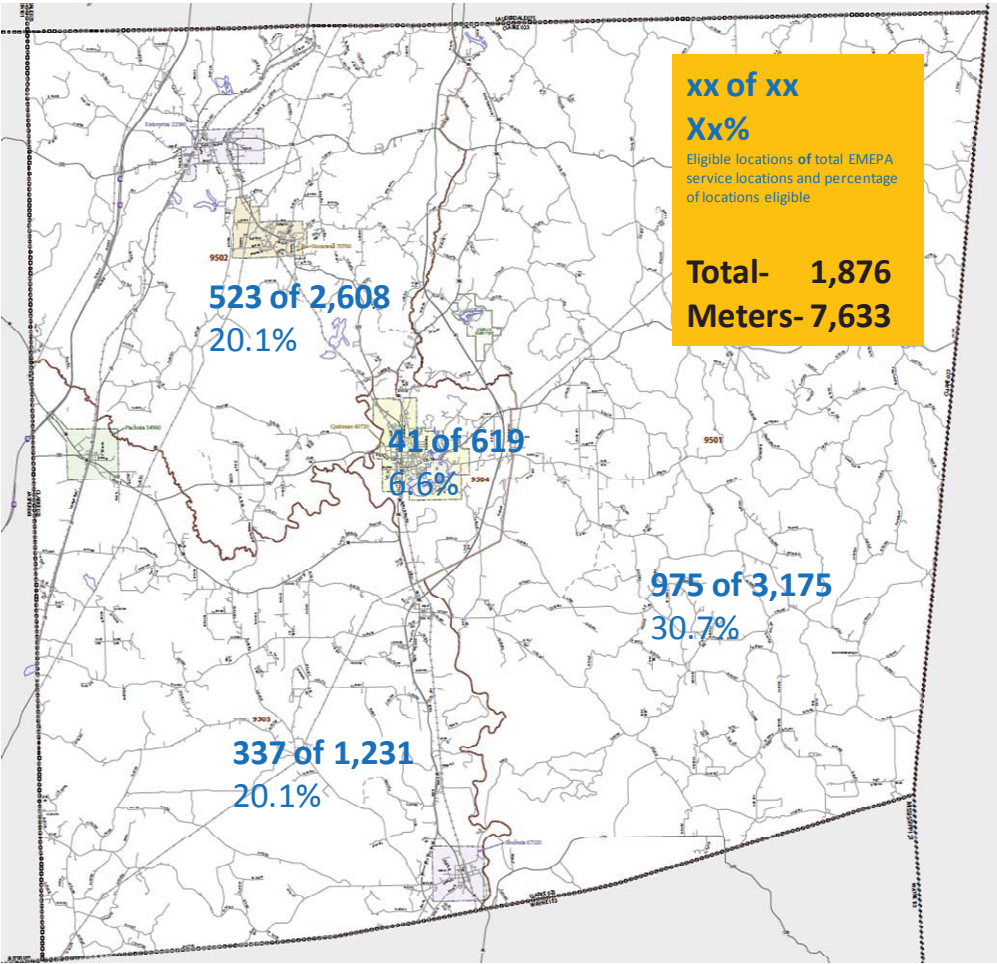
# Kemper



# Lauderdale Co.



# Clarke



## Appendix B – Wireless Broadband Propagation Map

